



Pollinator Program

ALABAMA EXTENSION



Pollinating the Field to Achieve the Yield; Program for Native Habitat On-Farm Assistance.

AU-BEES
AT AUBURN UNIVERSITY.



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Introduction

Many farmers have attained food safety certification which allows them to sell to larger retail and wholesale buyers. Although there are many variations of audit standards, all include Integrated Pest Management (IPM) guidelines. In 2020, the Sustainability Consortium developed a Responsible Pest Management (RPM) framework user guide for best practices in agriculture. This material supports producers to align with industry standards regarding responsible use of pesticides and pest management practices. Walmart, along with the IPM Institute of North America, was one of the first wholesales to integrate the biodiverse principles from the RPM Framework, including pollinator health commitments. These programs are aligned with the principles aligned with Global GAP standards and Integrated Farm Assurance (IFA) for crops including fruits and vegetables, flowers and ornamentals, hops, and teas.

Purpose and Objectives

Decreasingly, food safety certification have required that farmers must prioritize pollinator health on their farm. This left many farmers unable to continue selling to their wholesale buyers without changing their farming practices. The farmers want to meet these guidelines but were left without proper education for native habitat implementation which is where this program provides information to assist. Many buyers like the aforementioned Walmart have now set requirements that farms must have third-party certifications that verify IPM adoption or that are protective of pollinator health that include robust IPM criteria. The Planting for Pollinator Program teaches farmers how to meet the requirements to obtain the certifications. Some of these include:

- Bee Better Certified through the Xerces Society
- Equitable Food Initiative (EFI)
- Fair Trade International – Hired Labor
- LEAF Marque
- Rainforest Alliance
- Sustainable Food Group Sustainability Standard
- Sustainably Grown (SCS Global Services)
- USDA certified organic, as well as international organic labels that meet the USDA standard for equivalency.

Methods

The benefits that a farmer could see from obtaining one of these certifications includes the increase in crop yields and the potential to reach a broader customer base that is willing to pay more for environmentally friendly produce or being able to sell to more wholesale outlets. In the program we teach how buffer strips are a great way to start protecting the native bees on your farm. Education includes co-management and food safety. We surveyed participants pre and post workshop. Evaluation data is then collected to gather knowledge increase from activities.

Results

In the training we use research provided by Auburn University Bee Lab. The certifications average a requirement of 3% land use for native flowers. Research through Auburn University's Bee Lab has identified wildflower species that are highly attractive to native bees (Table 1)

Common Name	Growth Habit	For Bee Abundance	For Bee Diversity	For Uncommon Bees	For Honey Bees	My Selections	Price per lb
Lance-Leaved Coreopsis	Perennial	★	★			★	\$
Blanket flower	Annual	★	★	★		★	\$
Foxglove Beardtongue	Perennial					★	\$\$
Black-Eyed Susan	Annual	★	★	★			\$
Butterfly Milkweed	Perennial	★	★	★	★	★	\$\$\$
Plains Coreopsis	Annual						\$
Purple Coneflower	Perennial	★	★			★	\$
Bergamot	Perennial						\$\$
Mountain Mint	Perennial						\$\$
Gray-Headed Coneflower	Perennial	★	★	★			\$
Goat's-Rue	Perennial			★			\$\$
Blue Vervain	Perennial	★	★	★	★	★	\$
Partridge Pea	Annual	★	★			★	\$
Spotted Beebalm	Perennial					★	\$\$\$
Narrowleaf Sunflower	Perennial	★	★			★	\$\$
Goldenrod	Annual	★	★	★			\$\$
Frost Aster	Perennial	★		★			\$\$\$

■ Early Blooming
■ Mid Blooming
■ Late Blooming
■ Top 3 "powerhouse species"

Table 1. Early, mid, and late blooming species that have been identified to be highly attractive to bees in the southeastern United States by the Auburn University Bee Lab.

Conclusions and Future Work

The evaluation results we received showed a clear increase in knowledge in each category from a better understanding of certification guidelines to site prep. The attendees reported an overall success of the program. The workshops offered on-site pollinator scouting which is best done in spring and summer months, therefore, the workshops will resume in March 2022 and be offered statewide through the remainder of the year.

Have we exceeded your expectations in providing useful training?	
Yes	No
100%	0%

References

- Handbooks:
- 100 Plants to Feed the Bees by E. Lee-Mader, J. Fowler, J. Vento, and J. Hopwood. 2016. The Xerces Society.
 - Managing Alternative Pollinators. 2010. Sustainable Agriculture Research and Education Handbook.
- Online blogs:
- Pesticides and Pollinators. PennState Extension. <https://extension.psu.edu/pesticides-and-pollinators>. Accessed Aug 15, 2021.
 - Organic Crop Production. Alabama Cooperative Extension System. <https://www.aees.edu/blog/topics/crop-production/organic-crop-production/>. Accessed Aug 15, 2021.

Meeting Certification Standards		Co-management Considerations			Pollinator Plot Establishment			Attracting Native Pollinators			
Yes, I may use this tactic immediately	Not interested at all	I am interested in trying this out in 2-3 years	Yes, I may use this tactic immediately	Not interested at all	I am interested in trying this out in 2-3 years	Yes, I may use this tactic immediately	Not interested at all	I am interested in trying this out in 2-3 years	Yes, I may use this tactic immediately	Not interested at all	I am interested in trying this out in 2-3 years
50%	0%	50%	56%	0%	44%	80%	0%	20%	91%	0%	9%

Bee Better Certification			Co-Managing Insects and Wildlife			Mitigation Strategies			Site Preparation for Pollinators		
Before: Very knowledgeable	I had some knowledge	I had no knowledge about this	After: Very knowledgeable	I gained some knowledge today	Still Confused	Before: Very knowledgeable	I had some knowledge	I had no knowledge about this	After: Very knowledgeable	I gained some knowledge today	Still Confused
20%	10%	70%	40%	60%	0%	10%	45%	45%	40%	60%	0%
Before: Very knowledgeable	I had some knowledge	I had no knowledge about this	After: Very knowledgeable	I gained some knowledge today	Still Confused	Before: Very knowledgeable	I had some knowledge	I had no knowledge about this	After: Very knowledgeable	I gained some knowledge today	Still Confused
0%	0%	50%	50%	20%	80%	0%	18%	27%	55%	55%	45%
0%	0%	50%	50%	20%	80%	0%	18%	27%	55%	55%	45%

Figure 2 and 3. Pre and Post Test Evaluation Results

Assessing Environmental Hazards

Co-management!

- Co-management of conservation practices and food safety can help reduce the prevalence of foodborne pathogens in the farm environment
- Worker's training is a very important step on reducing cross-contamination

Figure 1. Graphic of On-Farm Management Strategy